

# **ZeroPoint Clean Tech, Inc.**

## **Biomass to Energy Solutions**

21st NREL Industry Growth Forum

Denver, Colorado

October 30, 2008



**ZEROPOINT**  
CLEAN TECH™

[zeropointcleantech.com](http://zeropointcleantech.com)

# ZeroPoint Overview

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- Advanced biomass gasification technology supplier
- Company formed and Series A round closed in 2006
- Industrial Scale Pilot Plant (2006 - Present)
  - Potsdam, NY
  - Biomass to synthesis gas and electricity at highest conversion efficiencies
  - Successfully tested wide range of feedstocks
- Series B Round 2007
- Established manufacturing agreement with globally competitive fabricator
- Commissioned First Commercial System (2008)
- Established 4 International Joint Ventures (U.K., India, Europe, Malaysia)



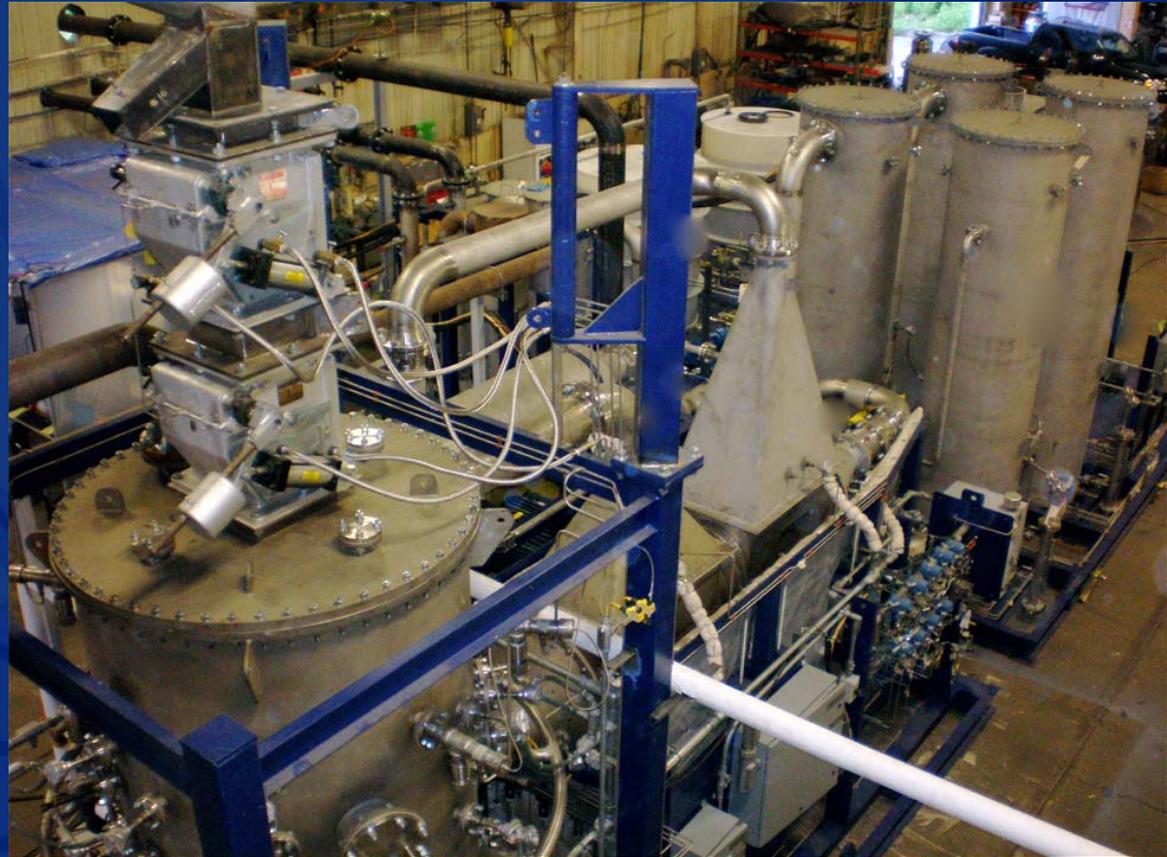
# Technology Overview

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- High efficiency biomass gasification in a distributed and scaleable format
- ZeroPoint systems are standardized, modular, and skid-mounted
- Downdraft gasification with real-time computer controlled process optimization
  - Conversion efficiencies >85%
- Each system will convert ~10,000 dry tons/yr biomass into clean synthesis gas
  - Equivalent to 2MW electrical generation plus 15MM BTU/HR waste heat
- ZeroPoint systems have produced clean synthesis gas from:
  - Wood Chips
  - Palm Fruit Baskets
  - Switchgrass
  - Cow Bedding
  - Palm Shells
  - Pelletized MSW
  - Sugarcane Bagasse
  - Wood Pellets
  - Distillers Grains



# ZeroPoint Commercial System #1 - Tonawanda, NY



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# Technology Differentiators

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- Modular systems are sized to the reality of available biomass
  - Abundant but decentralized supplies
  - 2 - 10 MW project size niche matches local feedstock supplies
- In-situ tar cracking and heat economization produce clean syngas
- ZeroPoint systems produce dispatchable renewable power, creating an advantage over intermittent resources (wind, solar)
- Capable of processing a wide array of feedstocks
- Multiple deployment opportunities include:
  - Biomass Combined Heat and Power
  - Renewable Gas
  - Distributed Generation
  - Liquid Fuels and Chemicals (pilot stage)



# Manufacturing Advantage

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- ZeroPoint has secured a 5 year manufacturing agreement with a globally competitive equipment fabricator
- Equipment is built to all international codes and standards
- Skid-mounted systems pre-commissioned at manufacturing facility
- Standardization creates manufacturing and deployment efficiencies
- Capable of ramping production capacity to meet ZeroPoint business pipeline



# ZeroPoint Key Management

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Highly experienced and uniquely qualified management team consisting of scientists, engineers, entrepreneurs, legal and financial experts with strong energy and utility backgrounds.

- **John Gaus, CEO and Chairman - Upstate NY**
  - John Gaus is a highly entrepreneurial co-founder and CEO of a series of energy software and process technology companies.
- **Dr. Philip Leveson, Chief Scientist - Atlanta**
  - Dr. Leveson has over 25 years of experience in biomass gasification, fischer-tropsch gas-to-liquids, and process optimization. Including work in these areas in the UK, US, and Brazil, where he worked on advanced processes for the gasification of sugarcane.
- **John W. Blend, Co-Chairman - Atlanta**
  - John Blend is a 30+ year veteran of the venture investing and new technology space with a focus on the energy industry. John was formerly a venture partner at Insight Capital and currently serves as founding general partner of Goshen Capital, an Atlanta based private equity firm.
- **Charlie Fox, President - New York City**
  - Charlie Fox is the former Deputy Secretary for Energy and Environment for the State of New York. Charlie was instrumental in development of the RGGI Carbon Trading Program and New York Renewable Portfolio Standard. Charlie is also a regulatory attorney and serves on the board of the SUNY School of Environmental Science and Forestry at Syracuse.
- **David Pitt, EVP International - London**
  - David Pitt is a professional Mechanical Engineer that has been involved in the energy industry for over 30 years, including design and project management, asset management systems, and global energy sales.



# Joint Venture Business Model

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- ZeroPoint has established four international Joint Ventures to date:
  - United Kingdom
  - Northern Europe
  - India
  - Malaysia
- Joint Venture guarantees sales pipeline in exchange for geographic exclusivity
- ZP deploys technology through Joint Ventures for substantial margin
- ZP also holds minority equity stake in Joint Venture for recurring project revenue streams
- All JVs are qualified counterparties, capable of handling and financing all project development efforts
- ZeroPoint is in advanced discussions with multiple utilities to replicate this model in U.S.
- Signed JV agreements represent ~\$800MM gross revenue over 5 years (2009 - 2013)



# Technology Sales Under Contract

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- Upstate New York - Recycling Residue
- London, England - Wood Pellets
- Belfast, Northern Ireland - Wood Pellets
- Munich, Germany - Green Waste
- United Kingdom - Wood Chips



# Future Markets

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- ZeroPoint has constructed a pilot scale gas-to-liquids plant
- Initial target product will be Cellulosic Diesel fuel
- Additional end products will include:
  - Ammonia
  - Ethanol
  - Methanol
- ZeroPoint will pursue distributed scale gas-to-liquids projects; 1 - 5 MGY matches locally available biomass
- Decentralized community scale liquids from biomass



# Strategic Position

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- ZeroPoint is currently approaching a cash flow positive position
- Expand Joint Venture model to U.S., Latin America, Canadian and Caribbean markets
- ZeroPoint is considering strategies to meet the business it has developed:
  - C Round to finance growth?
  - Strategic relationship with global engineering firm?



## Q & A

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